CLAIMS

1.-17. (canceled)

18. (currently amended) A method for continuously manufacturing films, webs, and sheets of plastics capable of forming optical images, the method comprising the steps of:

guiding a melted plastic mass (41), pre-shaped as a sheet, into a roller gap (31) of a calender, the roller gap (31) formed between a shaping engraving cylinder roller (11) and a smoothing strip (29) surrounding partially circumferentially the shaping engraving cylinder roller (11), wherein the roller gap extends circumferentially partially about the engraving cylinder roller;

heating the shaping engraving surface of the cylinder roller (11) to melting temperature at an intake of ~~in~~ the roller gap (31), wherein the melted plastic mass (41) is applied directly onto the shaping engraving surface of the heated cylinder roller (11); and

providing a profiling by cooling the melted plastic mass (41) in the roller gap (31) downstream of the intake by heat removal on a side of the melted plastic mass (41) facing the shaping engraving surface.

19. (currently amended) The method according to claim 18, wherein in the step of providing a profiling the heat removal is carried out in a controlled fashion along the path of the melted plastic mass (41) about the cylinder roller (11) such that on the side of the solidifying melted plastic mass facing the shaping engraving surface more heat is removed than on the smooth side facing the smoothing strip (29) and the melted plastic mass is hardened in top edges (4) of prisms of the profiling before the material strip exits from an exit gap (39) ~~(29)~~ of the calender as a finished product (19).

20. (original) The method according to claim 19, wherein the melted plastic mass solidified to the finished product (19) is moved in a stretched position or in an oppositely bent direction, as a function of the thickness and the mechanical properties of the finished product, to storage or further processing after leaving the exit gap (39).

21. (currently amended) The method according to claim 19, wherein the melting temperature is present not within the entire rotating mass of the cylinder roller (11) but only within a stationary heating zone (18) of the cylinder roller (11), the method further

comprising the step of preventing an increase of the heat in the cylinder roller mass by providing a cooling device (24, 25, 26; 27, 28) inside the cylinder roller or external to the cylinder roller at a location where the smoothing strip (29) surrounds partially circumferentially the cylinder roller and passing the melted plastic mass (41) through the cooling device temporally after the introduction into the intake of the roller gap (31).

22. (original) The method according to claim 19, further comprising the step of cutting the finished product (19) exiting from the calender to length by a transverse movement of a saw (35) matched to the moving speed of the product (19).

23. (original) The method according to claim 18, further comprising the steps of preparing the melted plastic mass (41), which is pre-shaped as a sheet, in an extruder (14) and transferring the melted plastic mass (41) from the extruder via a wide slot nozzle (15) directly onto the cylinder roller (11).

24. (original) The method according to claim 18, further comprising the steps of preparing the melted plastic mass (41), which is pre-shaped as a sheet, from a semi-finished plastic product by melting the semi-finished plastic product under a melting cover (38) and subsequently directly transferring the melted plastic mass (41) onto the cylinder roller (11).

25. (currently amended) A device for performing a method for continuously manufacturing films, webs, and sheets of plastics capable of forming optical images, wherein a melted plastic mass (41), pre-shaped as a sheet, is guided into a roller gap (31) of a calender, the roller gap (31) formed between a shaping engraving cylinder roller (11) and a smoothing strip (29) surrounding circumferentially partially the shaping engraving cylinder roller (11) wherein the roller gap extends circumferentially partially about the engraving cylinder roller; wherein the shaping engraving surface of the cylinder roller (11) is heated to melting temperature at an intake of ~~in~~ the roller gap (31), wherein the melted plastic mass (41) is applied directly onto the shaping engraving surface of the heated cylinder roller (11); and wherein a profiling by cooling the melted plastic mass (41) in the roller gap (31) downstream of the intake is provided by heat removal on a side of the melted plastic material (41) facing the shaping engraving surface; the device comprising:

a cylinder roller (11) having an exterior engraving sleeve (23);

a smoothing strip (29) partially circumferentially surrounding the cylinder roller (11) to form the roller gap (31) extending circumferentially partially about the engraving cylinder roller;

a positionable extruder (14) having a wide slot nozzle (15), wherein an opening surface of the wide slot nozzle (15) is adjustable longitudinally parallel to the surface of the cylinder roller (11) or to the surface of the engraving sleeve (23) so as to be variable with respect to spacing.

26. (original) The device according to claim 25, comprising a heating device (16) arranged shortly before an opening slot of the wide slot nozzle.

27. (original) The device according to claim 25, comprising an exit roller (13) having a diameter that is at least as large as a diameter of the cylinder roller (11), wherein an axis of rotation of the exit roller (13) is displaceable for changing a surrounding stretch of the smoothing strip (29).

28. (original) The device according to claim 27, wherein a spacing of the exit roller (13) from a roller axle (10) of the cylinder roller (11) is changeable.

29. (original) The device according to claim 25, wherein the exit roller (13) has an axle, wherein the device further comprises:

a cooling table (36) connected by a pivot arm (32) to the axle of the exit roller (13), wherein the cooling table (36) can be moved by the pivot arm (32) into various angular positions;

an angularly adjustable support table (34) pivotably connected on the cooling table (36); and

a deflection roller (22) with a bearing connected to the cooling table (36).

30. (original) The device according to claim 25, further comprising a cooling water supply line (24) and a cooling water removal line (25) arranged in a roller axle (10) of the cylinder roller (11), wherein the cooling water supply line (24) guided through the cylinder roller (11) is provided with a spray nozzle arrangement and wherein cooling water (26) sprayed by the spray nozzle arrangement is collected in the interior of the cylinder roller (11) to a controlled level and is removed by a suction pipe of the cooling water removal line (25).

31. (original) The device according to claim 25, wherein the smoothing strip (29) is an endless strip and wherein the device further comprises a strip guiding roller (21) and a deflection roller (22) for guiding the smoothing strip (29), wherein the smoothing strip (29) is tensioned by a spring-supported or hydraulically supported movement of the strip guiding roller (21) and does not exert own pressure onto the surrounded surface of the cylinder roller (11), wherein the device further comprises a pressure strip (30), not touching the deflection roller (22) and circulating inside of the smoothing strip (29) about a tensioning roller (20), wherein a tension of the pressure strip (30) is generated by a spring-supported or hydraulically supported movement of the tensioning roller (20).

32. (original) The device according to claim 31, further comprising cooling water nozzles (27) positioned at the surrounding stretch of the smoothing strip (29) and the pressure strip (30) about the cylinder roller (11), wherein the smoothing strip (29) and the pressure strip (30) are steel strips, wherein the cooling water nozzles (27) cool the steel strips by spraying cooling water on the steel strips and wherein cooling water sprayed by the cooling water nozzles (27) is collected in a cooling water tank (28) and removed by a cooling water discharge (37).

33. (original) The device according to claim 25, wherein the cylinder roller (11) is comprised substantially only of an engraving sleeve (23) and a heatable support roller (40) arranged in the engraving sleeve (23) for receiving a gap pressure of the roller gap (31) and for a linear axis-parallel heating of the engraving sleeve (23) in the area of the roller gap (31).

34. (currently amended) A device for performing a method for continuously manufacturing films, webs, and sheets of plastics capable of forming optical images, wherein a melted plastic mass (41), pre-shaped as a sheet, is guided into a roller gap (31) of a calender, the roller gap (31) formed between a shaping engraving cylinder roller (11) and a smoothing strip (29) surrounding circumferentially partially the shaping engraving cylinder roller (11) wherein the roller gap extends circumferentially partially about the engraving cylinder roller; wherein the shaping engraving surface of the cylinder roller (11) is heated to melting temperature at an intake of ~~in~~ the roller gap (31), wherein the melted plastic mass (41) is applied directly onto the shaping engraving surface of the heated

cylinder roller (11); and wherein a profiling by cooling the melted plastic mass (41) in the roller gap (31) downstream of the intake is provided by heat removal on a side of the melted plastic material (41) facing the shaping engraving surface; the device comprising:

a cylinder roller (11) having an exterior engraving sleeve (23);

a smoothing strip (29) partially circumferentially surrounding the cylinder roller (11) to form the roller gap (31) extending circumferentially partially about the engraving cylinder roller;

a melting cover (38) arranged upstream of the cylinder roller and configured to melt a pre-manufactured semi-finished plastic product to a melted plastic mass (41) directly supplied to the intake of the roller gap, wherein the melting cover ~~(39)~~, for producing different temperatures, opens into a heating cover (16) or is connected to a heating member (17) for heating a heating zone (18) of the cylinder roller (11).